

02/05/02

1c950 U.S. PTO

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PTO/SB/05 (08-00)

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 06204P USA

First Inventor Joshi, et al.

Title Ultra Low NOx Burner for Process Heating

Express Mail Label No. EL685809883US

1c971 U.S. PTO

10/067450

02/05/02

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages  ]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets  ]
5. Oath or Declaration [Total Pages  ]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 17 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☒ 37 CFR 3.73(b) Statement ☒ Power of  
(when there is an assignee) Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure ☒ Copies of IDS  
Statement (IDS)/PTO-1449 Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☒ Other: Letter

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP)

of prior application No.: \_\_\_\_\_

Prior application information:

Examiner: \_\_\_\_\_

Group / Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 18. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Labelor ☐ Correspondence address below

Name

23543

Air Products and Chemicals, Inc.

Address

City

State

Zip Code

Country

Telephone

Fax

Name (Print/Type)

Keith D. Gourley

Registration No. (Attorney/Agent)

32,988

Signature

Date 2/5/02

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

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**FEE TRANSMITTAL**  
**for FY 2002**

Patent fees are subject to annual revision.

**TOTAL AMOUNT OF PAYMENT** (\$) 956.00**Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Joshi, et al
Examiner Name	
Group Art Unit	
Attorney Docket No.	06204P USA

**METHOD OF PAYMENT**

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number	01-0493
Deposit Account Name	Air Products and Chemicals, Inc.

☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17☐ Applicant claims small entity status. See 37 CFR 1.27

- 2.
- ☐
- Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 740	201 370	Utility filing fee	740
106 330	206 165	Design filing fee	
107 510	207 255	Plant filing fee	
108 740	208 370	Reissue filing fee	
114 160	214 80	Provisional filing fee	

**SUBTOTAL (1)** (\$) 740**2. EXTRA CLAIM FEES**

Total Claims	Extra Claims	Fee from below	Fee Paid
32	-20** = 12	18	216
Independent Claims	2	-3** = 0	84
Multiple Dependent			

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103 18	203 9	Claims in excess of 20
102 84	202 42	Independent claims in excess of 3
104 280	204 140	Multiple dependent claim, if not paid
109 84	209 42	** Reissue independent claims over original patent
110 18	210 9	** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$) 216

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Fee Code	Large Entity Fee (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65		Surcharge - late filing fee or oath	
127 50	227 25		Surcharge - late provisional filing fee or cover sheet	
139 130	139 130		Non-English specification	
147 2,520	147 2,520		For filing a request for <i>ex parte</i> reexamination	
112 920*	112 920*		Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*		Requesting publication of SIR after Examiner action	
115 110	215 55		Extension for reply within first month	
116 400	216 200		Extension for reply within second month	
117 920	217 460		Extension for reply within third month	
118 1,440	218 720		Extension for reply within fourth month	
128 1,960	228 980		Extension for reply within fifth month	
119 320	219 160		Notice of Appeal	
120 320	220 160		Filing a brief in support of an appeal	
121 280	221 140		Request for oral hearing	
138 1,510	138 1,510		Petition to institute a public use proceeding	
140 110	240 55		Petition to revive - unavoidable	
141 1,280	241 640		Petition to revive - unintentional	
142 1,280	242 640		Utility issue fee (or reissue)	
143 460	243 230		Design issue fee	
144 620	244 310		Plant issue fee	
122 130	122 130		Petitions to the Commissioner	
123 50	123 50		Processing fee under 37 CFR 1.17(q)	
126 180	126 180		Submission of Information Disclosure Stmt	
581 40	581 40		Recording each patent assignment per property (times number of properties)	
146 740	246 370		Filing a submission after final rejection (37 CFR § 1.129(a))	
149 740	249 370		For each additional invention to be examined (37 CFR § 1.129(b))	
179 740	279 370		Request for Continued Examination (RCE)	
169 900	169 900		Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$) 0**SUBMITTED BY**

Name (Print/Type)	Keith D. Gourley	Registration No. (Attorney/Agent)	32,988	Telephone	(610) 481-6566
Signature		Date	2/5/02		

Complete (if applicable)

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

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PATENT: 06204P USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLI-  
CATION OF : Joshi, et al.

SERIAL NO. : : GRP. ART UNIT:

FILED : : EXAMINER:

FOR : Ultra Low NOx Burner for Process Heating

Assistant Commissioner for Patents  
Washington, D.C. 20231

<b>CERTIFICATE OF MAILING</b>	
I CERTIFY THAT THIS PAPER (ALONG WITH ANY PAPER REFERRED TO AS BEING ATTACHED OR ENCLOSED) IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE WITH SUFFICIENT POSTAGE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO:	
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ON	<u>February 5, 2002</u>
	Date
	<u>Keith D. Gourley</u>
	(Type or print name of person mailing paper)
	<u>[Signature]</u>
	Signature of person mailing paper

Sir:

**LETTER**

The above referenced application is a continuation-in-part of our patent application, Docket No. 06204 USA, entitled "Large Scale Vortex Devices for Improved Burner Operation", filed on 31 January 2002 (copy attached). Reference to this application, in the Cross-Reference to Related Applications section of patent application 06204P USA, will be made in a preliminary amendment upon receipt of a first office action.

Respectfully submitted,

[Signature]  
Keith D. Gourley  
Patent Attorney  
Registration No. 32,988

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Allentown, PA 18195-1501  
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**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Joshi, et al.

Application No./Patent No.: \_\_\_\_\_ Filed/Issue Date: \_\_\_\_\_

Entitled: Ultra Low NOx Burner for Process Heating

Air Products and Chemicals, Inc., a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or  
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☐ Copies of assignments or other documents in the chain of title are attached.  
**[NOTE:** A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

2/5/02  
Date

William F. Marsh  
Typed or printed name  
[Signature]  
Signature  
Assistant General Counsel, Patents  
Title